George's PINK PAGES

October 2001

Terror Time for Bees

September 11th will not be forgotten by most of us, just as December 7, 1941 is still quite vivid in the minds of we older folks. As a Citadel cadet in Charleston, SC, I was eating a banana split in Raley's Drug Store on King Street in Charleston when the notice came on the radio that Sunday afternoon of the Japanese attack on Pearl Harbor. War was here and I was studying to be a scientist and 2nd Lieutenant in the U. S. Army, so I hurried back to barracks.

Starving to death is surely a horrible way to die, and who is not to say that a beekeeper who allows his bees to enter the winter without enough food for them to make it through the winter is not some kind of terrorist? For what it is worth, the "famous" Hagerstown Almanac predicts that we will have a long cold and snowy winter. In Maryland, a colony of bees needs about 70 pounds of honey, 14 capped deep frames or 21 capped medium frames, to make it from now to April. Do your colonies have that much stores on board? In the past couple of months, as cripple as I am, I have had reasons to visit with some beekeepers and see their colonies, and know that their colonies were very light in stores and I mentioned looking for sales on sugar to feed them. I know that after I removed my honey crop from my dozen colonies in late June, that there has been little or no nectar collected since and I have been feeding since Montgomery County FAIR time in mid August.

For the benefit of both beginners and experienced beekeepers, let me revue how to feed your bees now that it is October, when there could be severe robbing on a flight day. This is NOT the time to feed 1:1 thin sugar syrup, but the bees need sugar syrup similar to honey which is 2:1 heavy syrup, 2 pounds of sugar dissolved in 1 pint of water. That is so concentrated that it is difficult to get 2 pounds of sugar dissolved in any heated water unless the water is BOILING. Further, you dare not try to add sugar to boiling water while it is on the stove because you will probably burn the sugar and caramelize it like making fudge, which will make bees SICK. As a typical scientist, I use a thermometer, dissolve 1 pound of sugar in a pint of hot water, bring that solution to a BOIL at 212F., and then add another pound of sugar with a lot of stirring. (A real pain in the fanny, but so is anything that is of value). Those are the basic formula and rules, but I prepare everything for 1 gallon glass jugs; so I dissolve 7 1/2 pounds of sugar in 2 quarts (4 pints) of boiling water, which is a sugar to water ratio of 1.88.

What type of feeder are you going to use? There are basicly 5 different types of feeders, but I personally think an upside down glass jar or pail is the ONLY one to use because there are far too many problems with any of the other 4 types. I will explain. By my standards, the ENTRANCE feeder is a total joke! It is not big enough, it attracts all kinds of robbers, but mainly bees will NOT leave a warm cluster to go down to the cold

front entrance to get feed! It should NEVER be used for anything but firewood. The HIVE TOP feeder is a fine feeder in WARM WEATHER, but is totally useless in cold weather because bees will starve to death rather than break a warm cluster to go to food. There is the BAGGIE feeder that holds one or two gallon plastic bags of sugar syrup, but it suffers the same complaint as the Hive Top feeder that bees will not leave a warm cluster to travel several inches to the bags of sugar syrup. Lastly, there is the DIVISION BOARD feeder which is the worst of all feeders for use in cold weather; because the beekeeper has to totally open the hive to either inspect or refill the feeder, if it is warm enough for the bees to go to the feeder, many bees drown in the syrup, and like the Entrance, Hive Top, and Baggie feeders, bees will not leave a warm cluster and travel several inches to the Division Board feeder in cold weather.

Go to a deli and ask the owner for empty gallon, GLASS jars that held dill pickles, pigs feet, mustard, or potato salad. He trashes them, but give him a jar of your honey and he will save them for you. Why GLASS, and not PLASTIC? When turned upside down, the weight of the sugar syrup tends to cause the plastic shape to collapse, and suddenly the syrup runs into the hive like "dumping a pail of water". Drill about 4 holes in the jar lid using a bit no larger than 1/16" or 3/32". A hole 1/8" is too large and the syrup might run all over the bees, which will kill them if clustered. If there is no emergency for you to feed, you simply invert the gallon jar over the hole in the inner cover. I put two little sticks, about 1/4" in diameter, near either end of the inner cover hole ON TOP OF THE FRAMES, so that the weight of the jug of sugar syrup can't bend the inner cover down on top of the frames below it. If you need to give the bees a LOT of syrup in a hurry, do away with the inner cover, and invert 1, 2, 3, or even 4 gallon jugs of syrup directly of top of the 10 frames and surround these jars with an empty deep hive body or 2 medium hive bodies to keep out the wind, rain, or snow. Feeding this way is so easy, because the jars are sitting right on top of the frames that hold the bees and the bees can feed themselves and store away feed without breaking cluster! Just in case you don't really understand bees "clustering" or the term "tight cluster": The wing muscles of a honey bee become paralyzed at temperatures below 50F, so when the outside temperature drops below 50F, bees think about "huddling up" to keep warm. When the temperature inside the hive gets down to about 40F, bees begin to cluster together tightly, and won't even move a distance of just 1-2 inches away from the cluster in fear of losing cluster warmth and becoming even leg paralyzed so they can't move at all and die. 1-2 inches is not very much distance, and that is very reason that the ENTRANCE feeder, HIVE TOP feeder, BAGGIE feeder, and DIVISION BOARD feeder all FAIL TO FEED BEES when it is cold, because the bees just can't travel the 5"-6" from the cluster to these feeders!

Lastly, don't tell me or others that a cold winter killed your bees, because you are just showing your lack of knowledge about bees. COLD temperatures, not even 60F below zero, killed healthy bees in tests conducted by numerous bee scientists, and this has been well documented in numerous bee books. Winter losses are primarily due to lack of AVAILABLE food, disease, mites (particularly the tracheal mite), death of an old queen, a hive weak in population going into the winter, lack of ventilation and DAMPNESS. Every colony should have an upper entrance at the inner cover level to

release the damp exhaled breath of the clustered bees. Don't think of keeping warmth in a bee hive like keeping warmth in your house. Recently, we have learned that a SCREENED bottom board provides more ventilation and hence better winter protection for bees than the standard wooden bottom board. Talk to the working bee scientists and bee researchers of today if you doubt me. We learn new things in our CHANGING TIMES. For example, when I was born, new mothers were kept at bed rest in the hospital for 10 days before they could go home. The first heart transplant was just 40 years ago, and now we even have multiple transplants of lungs, kidneys, and liver. My wife has new plastic knees. Now, artificial insemination of queen bees has become a major tool in the breeding of bees to gain desirable traits or curtail undesirable traits (look at ads in Bee Culture or the American Bee Journal about the sale of breeder queens, hygienic queens, SMR queens, and others).

Don't be a TERRORIST and let your bees die of starvation, because you were too lazy to feed them. I have given you fair warning that I have seen a lot of light weight colonies out there that could be saved by feeding heavy sugar syrup in October and November. And while you are about it, don't forget to feed Fumidil-B to kill the spores of NOSEMA disease which normally damages honey production the following year; and bee scientists estimate that over half of all bee colonies in the entire country have some nosema disease every spring because people are careless and don't treat for it in October and November.

I hope that you don't think that this article is just the "prattlings of a nasty, old man" who really should not make all these blunt statements; but I am willing to be DEMANDING and BLUNT even if it makes you mad at me so that you react, attend to your bees if they are light in stores and hence become a better beeKEEPER and not just a beeHAVER. Then, you too can join with me in knowing the JOYS OF BEEKEEPING.

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I have mentioned bee scientists and bee researchers several times. Many, many of them attend the annual meeting of the American Beekeeping Federation to be held in one of the jewel cities of the South this coming January in Savannah, Georgia. Why don't you join me there, and we can lunch with them, or just get them aside and talk with them. Further, many of the major honey producers of our country will be present and you can talk with them and hear how they manage 20,000 colonies, hear how much honey they produce per colony, hear how often they requeen, and hear how they treat diseases. Further, you can visit Wilbanks Apiary FREE OF CHARGE and see their queen production facilities that produce tens of thousands of queens each year, or you can take a two day tour of some Georgia and Florida Apiaries after the 4 day meeting is over, again FREE OF CHARGE.
You will hear presentations of some of the finest bee scientists, researchers, breeders, and honey producers in the world, sit with them and talk with them; and you will not be expected to listen to any of my presentations because you can hear me anytime. WHAT A TIME FOR A VACATION - IN THE SUNNY SOUTH AFTER CHRISTMAS.
I sure hope to see every one of you in Savannah just 3 months from now!